AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A field condensing sensor device, comprising:

a telescope optical system having an input encompassing a first field of view and an output that is magnified by less than one in at least a first plane;

a filter positioned to receive light output by said telescope optical system, wherein said filter features a number of passbands, wherein said light output by said telescope optical system within said first plane is incident on said filter within a first maximum angle, wherein said light output by said telescope optical system within a second plane that is orthogonal to said first plane is incident on said filter within a second maximum angle, and wherein said first maximum angle is less than said second maximum angle; and

a detector positioned to receive light passed by said filter.

2. (Original) The device of Claim 1, wherein said telescope optical system comprises an anamorphic telescope, wherein light received at an angle to an axis of said telescope with respect to said first plane is magnified by an amount of less than one, and wherein light received at an angle to an axis of said telescope with respect to a second plane is not magnified.

3. (Original) The device of Claim 2, wherein said first plane is substantially perpendicular to said second plane.

4. (Currently Amended) ~~The device of Claim 1~~A field condensing sensor device, comprising:

a telescope optical system having an input encompassing a first field of view and an output that is magnified by less than one in at least a first plane;

a filter positioned to receive light output by said telescope optical system; and

a detector positioned to receive light passed by said filter, wherein said first field of view is about four degrees, wherein light collected from within said first field of view has a maximum

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angle of incidence with respect to said filter of no more than one degree in said at least a first plane.

5. (Original) The device of Claim 1, wherein said magnification in said at least a first plane is no more than 0.25.

6. (Currently Amended) ~~The device of Claim 1~~A field condensing sensor device, comprising:

a telescope optical system having an input encompassing a first field of view and an output that is magnified by less than one in at least a first plane;

a filter positioned to receive light output by said telescope optical system; and

a detector positioned to receive light passed by said filter, wherein said first field of view is about ten degrees, and wherein light collected from within said field of view has a maximum angle of incidence with respect to said filter of no more than one degree in said at least a first plane.

7. (Original) The device of Claim 1, wherein said magnification in said at least a first plane is no more than 0.1.

8. (Original) The device of Claim 1, wherein said telescope optical system provides a first magnification with respect to any ray within said first field of view.

9. (Original) The device of Claim 1, wherein said filter comprises at least a first optical cavity.

10. (Original) The device of Claim 9, wherein said at least a first optical cavity comprises a material having a high index of refraction.

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11. (Currently Amended) ~~The device of Claim 10~~A field condensing sensor device, comprising:

a telescope optical system having an input encompassing a first field of view and an output that is magnified by less than one in at least a first plane;

a filter positioned to receive light output by said telescope optical system; and

a detector positioned to receive light passed by said filter, wherein said filter comprises at least a first optical cavity, wherein said at least a first optical cavity comprises a material having a high index of refraction, wherein a maximum angle of incidence of light collected from within said first field of view that is incident on said filter is no more than one degree in said at least a first plane, and wherein a maximum angle of said light collected from within said first field of view within said optical cavity is less than 0.2 degree.

12. (Original) The device of Claim 10, wherein said at least a first optical cavity comprises Germanium.

13. (Original) The device of Claim 9, wherein said at least a first optical cavity is provided as part of an etalon.

14. (Original) The device of Claim 1, wherein said filter comprises a plurality of optical cavities.

15. (Currently Amended) ~~The device of Claim 14,~~A field condensing sensor device, comprising:

a telescope optical system having an input encompassing a first field of view and an output that is magnified by less than one in at least a first plane;

a filter positioned to receive light output by said telescope optical system;

a detector positioned to receive light passed by said filter, wherein said filter comprises a plurality of optical cavities, and wherein said filter comprises at least a first thin layer reflector stack.

16. (Currently Amended) The device of Claim 1, further comprising a cold stop located between said telescope optical system and said detector.

17. (Currently Amended) A method for remotely sensing atmospheric trace gas, comprising:

collecting light from within a first field of view;

magnifying said collected light in at least a first plane by a magnification factor that is less than one; and

filtering said light magnified in said at least a first plane in a filter having an optical cavity, wherein said filtering comprises substantially blocking light at wavelengths not corresponding to a selected number of spectral lines of absorption of an atmospheric trace gas.

18. (Original) The method of Claim 17, further comprising:

measuring an intensity of said filtered light.

19. (Currently Amended) ~~The method of Claim 17~~A method for remotely sensing atmospheric trace gas, comprising:

collecting light from within a first field of view;

magnifying said collected light in at least a first plane by a magnification factor that is less than one; and

filtering said light magnified in said at least a first plane in a filter having an optical cavity, wherein filtering said light comprises passing wavelengths of said magnified light corresponding to spectral lines of absorption of an atmospheric gas.

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20. (Original) The method of Claim 19, further comprising:

measuring an intensity of said filtered light; and

correlating said measured intensity to a concentration of said atmospheric gas within at least a portion of said first field of view.

21. (Original) The method of Claim 19, wherein filtering said light further comprises attenuating wavelengths of said magnified light outside of a first range of wavelengths.

22. (Original) The method of Claim 17, further comprising:

magnifying said collected light in a second plane by a magnification factor that is less than one.

23. (Original) The method of Claim 22, wherein said magnification factor in said first plane is equal to said magnification factor in said second plane.

24. (Original) The method of Claim 17, further comprising:

passing at least one of said collected light and said light magnified in at least a first plane through a cold stop.

25. (Original) The method of Claim 17, wherein said filter comprises a Fabry-Perot interferometer.

26. (Currently Amended) A system for remotely sensing atmospheric trace gas, comprising:

means for condensing a field angle of light collected from within a first field of view within at least a first plane, wherein an output of said means for condensing comprises light having a condensed field angle within said at least a first plane; and

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means for filtering said light having a condensed field angle, wherein said field angle is measured with respect to a surface of said means for filtering.

27. (Original) The system of Claim 26, wherein said means for condensing further functions to condense a field angle of light collected from within said first field of view within a second plane that is perpendicular to said first plane.

28. (Original) The system of Claim 26, wherein said means for filtering comprises optical cavity means including an optical cavity having a high index of refraction.

29. (Currently Amended) ~~The system of Claim 26~~A system for remotely sensing atmospheric trace gas, comprising:

means for condensing a field angle of light collected from within a first field of view within at least a first plane; and

means for filtering said light having a condensed field angle, wherein said first field of view is greater than about 4 degrees.

30. (Original) The system of Claim 26, further comprising:

means for measuring an intensity of said filtered light.

31. (Original) The system of Claim 26, further comprising:

means for blocking unwanted background radiation.

32. (New) The device of Claim 1, wherein said detector comprises a two-dimensional array.

33. (New) The device of Claim 1, wherein said filter includes a compensation stack including a plurality of layers, wherein an optical thickness of at least some of said layers of said

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compensation stack does not equal an integer multiple of one quarter of a wavelength of light having a first wavelength corresponding to a first pass band of said filter device having a first center wavelength, wherein such filter device further comprises a second pass band having a second center wavelength and a third pass band having a third center wavelength, wherein said first center wavelength is separated from said second center wavelength by a first amount, and wherein said second center wavelength is separated from said third center wavelength by a second amount that is not equal to said first amount.

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